

Application No. 09/869,796

The attached Appendix includes marked-up copies of each rewritten claim (37 C.F.R. §1.121(c)(1)(ii)).

Respectfully submitted,



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Attached: APPENDIX

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APPENDIX

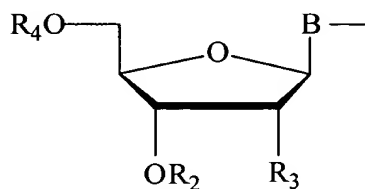
Changes to Claims:

The following are marked-up versions of the amended claims:

4/ (Amended) Compound according to claim 1 ~~any one of claims 1 to 3~~, characterized in that L comprises at least eight atoms.

5/ (Amended) Compound according to claim 1 ~~any one of claims 1 to 4~~, characterized in that L is a saturated or unsaturated hydrocarbon-based chain, optionally interrupted by at least one function chosen from amine, amide and oxy functions.

6/ (Amended) Compound according to claim 1 ~~any one of claims 1 to 5~~, characterized in that W corresponds to the general formula (II)



(II)

in which:

- R₂ represents H or a protective group,
- R₃ represents H, F, OH, SH, NH₂, OCH₃ or OR₅ in which R₅ represents a protective group or an alkyl chain,
- R₄ represents an H radical, a protective group or a mono-, di- or triphosphate group,
- W being attached to L via B.

8/ (Amended) Compound according to claim 6 ~~claims 6 and 7~~, characterized in that R₂ is an H, R₃ is an OH group and R₄ is a triphosphate group.

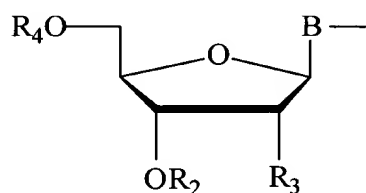
9/ (Amended) Compound according to claim 6 ~~claims 6 and 7~~, characterized in that R₂ is a 2-cyanoethyl-N,N-diisopropylphosphoramidite group and R₃ is H or OR₅ in which R₅ is a protective group used in oligoribonucleotide synthesis and R₄ is a 4,4'-dimethoxytrityl group.

10/ (Amended) Functionalized polynucleotide comprising at least one functionalized compound according to claim 1 ~~any one of the preceding claims~~.

16/ (Amended) Polynucleotide according to claim 13~~any one of claims 13 to 15~~, characterized in that L comprises at least eight atoms.

17/ (Amended) Polynucleotide according to claim 13~~any one of claims 13 to 16~~, characterized in that L is a saturated or unsaturated hydrocarbon-based chain, optionally interrupted by at least one function chosen from amine, amide and oxy functions.

18/ (Amended) Polynucleotide according to claim 13~~any one of claims 13 to 17~~, characterized in that W corresponds to the general formula (II)



(II)

in which:

- R₂ represents H or a protective group,
- R₃ represents H, F, OH, SH, NH₂, OCH₃ or OR₅ in which R₅ represents a protective group or an alkyl chain,
- R₄ represents an H radical, a protective group or a mono-, di- or triphosphate group,
- W being attached to L via B.

20/ (Amended) Polynucleotide according to claim 18~~claims 18 and 19~~, characterized in that R₂ is an H, R₃ is an OH group and R₄ is a triphosphate group.

21/ (Amended) Compound according to claim 18~~and 19~~, characterized in that R₂ is a 2-cyanoethyl-N,N-diisopropylphosphoramidite group and R₃ is H or OR₅ in which R₅ is a protective group used in oligoribonucleotide synthesis and R₄ is a 4,4'-dimethoxytrityl group.

22/ (Amended) Polynucleotide according to claim 13~~any one of claims 13 to 21~~, characterized in that the labeling reagent comprises a hydrazine or alkoxyamine function.

24/ (Amended) Method for detecting a target nucleic acid, characterized in that this target nucleic acid is brought into contact with at least one functionalized nucleotide as defined in claim 13~~any one of claims 13 to 21~~, in the presence of elements and under conditions required for producing a polynucleotide, so as to produce a functionalized

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polynucleotide; the polynucleotide obtained is labeled with a labeling reagent; and then said labeled polynucleotide is detected.

26/ (Amended) Method for detecting a target nucleic acid, characterized in that this target nucleic acid is brought into contact with a functionalized polynucleotide according to claim 10~~any one of claims 10 to 12~~; the labeling reagent is reacted; and the presence of the target nucleic acid is detected.

27/ (Amended) Method for detecting a target nucleic acid, characterized in that a labeled polynucleotide according to claim 13~~any one of claims 13 to 23~~ is available for use, this target nucleic acid is brought into contact with the labeled polynucleotide; and the presence of the target nucleic acid is detected.